

REMARKS

No new matter is introduced in the amended claims; entry of the amended claims is respectfully requested. Reconsideration of the rejection is respectfully requested.

The present invention is directed to a mixture comprising vulcanizable elastomers in combination with a thermoplastic polymer, mineral fillers, a colorant and an odor-masking agent. Upon molding and vulcanization, the molded object has the look and feel of natural clay, but with improved low temperature and mechanical stability.

Claims 18-21 are rejected under 35 U.S.C. § 112, second paragraph, in that these claims are said to be basically directed to intended use of a molded object, and such intended use cannot clearly define patentable parameters of a composition. This rejection is respectfully traversed.

Claim 18, directed to the molded object serving as a replacement or substitute for objects molded using natural terracotta or clay, has been cancelled. However, claims 19 and 20 are directed to molded objects wherein the objects are identified as specific types of containers and therefor clearly define patentable subject matter. Claim 21 has been cancelled and its content embodied in amended claim 14. In view of the amendments and comments, it is respectfully suggested that the rejection under 35 U.S.C. § 112, second paragraph, is no longer appropriate. Withdrawal of the rejection is respectfully requested.

Claims 1-24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Sandstrom et al.* ("*Sandstrom*"), *Tsuji et al.* ("*Tsuji*") or *Kushida et al.* ("*Kushida*"). It is noted that these references are relied on in the alternative. The Examiner states that these patents show compositions which can be based upon the instantly claimed

vulcanizable elastomer and that the claimed fillers and pigments are further shown in the references. The Examiner notes specific portions of each of the references showing pigments, fillers, vulcanizable elastomers and molded articles. It is concluded that in view of these disclosures, the present claims are rendered *prima facie* obvious. This rejection is traversed.

To begin with, it is respectfully suggested that the *Kushida* reference is not relevant to the present invention since it is directed to a composition produced using a "dynamic vulcanization" process (col. 2, line 25 to col. 3, line 13) employing powdered, pre-crosslinked NBR (claims). Furthermore, *Kushida* does not disclose that styrene-butadiene copolymer is an elastomer that can be used in the compositions of that invention. Such a process and materials are distinctly different in kind from those identified in the present invention and cannot properly be said to render obvious the presently claimed composition and method. The *Sandstrom* reference is directed to tire tread compositions, and although it discloses the use of mineral fillers, it does so at much lower concentrations than the claims of the present invention and always in combination with carbon black, the latter causing the composition to be black in color and therefor inconsistent with an object having the look of natural clay. Conversely, the use of mineral fillers at the concentration levels presently claimed would not be suitable for use in tire tread compositions. Finally, *Sandstrom* does not include the use of a thermoplastic elastomer such as polyvinylchloride.

Tsuji broadly discloses the combined use of a new NBR copolymer and polyvinylchloride (PVC) in vulcanized compositions employing mineral fillers at various concentrations. In other words, it is specifically directed to a new copolymer and broadly discloses the utility of that copolymer in blends with PVC and fillers for various uses. The presently amended claims

are distinguished from *Tsuji* in that they require the presence of another elastomeric copolymer, styrene-butadiene, at least one odor-masking agent and that the vulcanized composition has the "look and feel of natural clay." It is specifically noted that none of the references, including *Tsuji*, describe the concept of preparing a composition having the look and feel of natural clay or terracotta which is to be used as a substitute for molded objects made from such materials but also having improved properties. Withdrawal of this rejection in view of the amendments and remarks is respectfully requested.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with Markings to Show Changes Made."

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

✓ By 

Harvey L. Cohen

Registration No.: 28,365

LERNER, DAVID, LITTENBERG,

KRUMHOLZ & MENTLIK, LLP

600 South Avenue West

Westfield, New Jersey 07090

(908) 654-5000

Attorneys for Applicant

Version With Markings to Show Changes Made

1. A composition prepared by forming a mixture comprising, on the basis of parts by weight per hundred of elastomer or rubber, phr:

(a) 100 phr of:

~~(i) at least one vulcanizable elastomer; or~~
~~(ii) a mixture comprising of said at least one vulcanizable elastomer~~ elastomers styrene-butadiene copolymer and butadiene-acrylonitrile copolymer and at least one thermoplastic polymer or thermoplastic elastomer comprising polyvinyl chloride;

(b) from about 150 phr to about 500 phr of at least one mineral filler;

(c) from about 0.1 phr to about 10 phr of at least one pigment or colorant; ~~and~~

(d) at least one vulcanizing agent in sufficient quantity to substantially fully vulcanize said ~~at least one vulcanizable elastomer~~ elastomers; and

(e) from about 0.01 to about 10 phr of at least one odor masking agent;

wherein, upon vulcanization, said composition has the look and feel of natural clay.

2. The composition of claim 1 wherein said ~~vulcanizable elastomer or rubber~~ elastomers further include at least one additional elastomer ~~is~~ selected from the group consisting of natural rubber and synthetic rubber.

3. The composition of claim 2 wherein said synthetic rubber is selected from the group consisting of ~~butadiene-acrylonitrile copolymers, styrene-butadiene copolymers,~~ ethylene-propylene copolymers and terpolymers, hydrogenated styrene-containing block copolymers, polybutadiene, polyisoprene and butyl rubber.

5. The composition of claim 4—1 wherein the mixture of butadiene-acrylonitrile copolymer and polyvinyl chloride comprises from about 50 wt.% to about 20 wt.% polyvinyl chloride.

10. The composition of claim 9—1 wherein said at least one odor masking agent is selected from the group consisting of natural and artificial scents.

14. A vulcanized, molded object having the look and feel of natural clay prepared by:

(1) forming a mixture of a molding composition comprising, on the basis of parts by weight per hundred of elastomer or rubber, phr:

(a) 100 phr of:

~~(i) at least one vulcanizable elastomer; or~~

~~(ii) a mixture comprising~~ said at least one vulcanizable elastomer elastomers styrene-butadiene copolymer and butadiene-acrylonitrile copolymer and at least one thermoplastic polymer or thermoplastic elastomer comprising polyvinyl chloride;

(b) from about 150 phr to about 500 phr of at least one mineral filler;

(c) from about 0.1 phr to about 10 phr of at least one pigment or colorant; ~~and~~

(d) at least one vulcanizing agent in sufficient quantity to substantially fully vulcanize said ~~at least one vulcanizable elastomer~~ elastomers; ~~and~~

(e) from about 0.01 to about 10 phr of at least one odor masking agent;

(2) molding the resultant mixture to a desired shape; and

(3) curing or vulcanizing said shaped mixture; wherein, upon vulcanization, said object has the look and feel of natural clay.

15. The molded object of claim 14 ~~wherein said vulcanizable elastomer comprises a mixture of butadiene acrylonitrile copolymer blended with polyvinyl chloride and styrene butadiene copolymer~~ further comprising a thermosetting resin.

16. The molded object of claim 15 ~~further comprising from about 0.01 to about 10 phr of at least one odor masking agent~~ wherein said thermosetting resin is a coumarone-indene resin.

22. The molded object of claim ~~21~~ 14 having improved low temperature and mechanical stability properties.